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ABSTRACT

Colleges and universities are now dealing with certain students through a new component in their instructional environment. These emerging Learning Centers are typically designed to assist and guide capable but fundamentally ill-prepared handicapped students in acquiring needed background. In some cases, such components not only help dispense prerequisite skills to students with inadequate high school preparation, but also assist students in preparation for even higher levels of education programs. The Learning Center generally has learning laboratory components which provide fundamental learning skill development work on an individual or small-group basis in such areas as reading, vocabulary, writing, studying, and basic computational skills. Within these laboratories the use of instructional technology differs considerably with the philosophical orientation and financial resources of each center. Students are identified and assessed, and prescriptive programs of remediation are presented. Learning Centers vary in both name and function from one institution to another. Most are similar, however, in that they seek to limit unnecessary pupil drop-outs, enhance learning skills, minimize the trauma of academic failure, improve the academic performance of their students, and, most importantly, provide learning opportunities for the handicapped to get into the mainstream of higher education. Learning Centers frequently deliver their services through the activities of sub-programs such as learning laboratories which are composed of counseling laboratories, reading laboratories, mathematics laboratories, basic skills programs, paraprofessional laboratories, and tutorial programs. (Author)

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Learning Centers: Alternatives to Bridging the Gap between Secondary and Post Secondary Education

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Colleges and Universities are now dealing with certain students through a new component in their instructional environment. These emerging "Learning Centers" are typically designed to assist and guide the capable but fundamentally ill-prepared handicapped students in acquiring needed background. In some cases, such components not only help dispense prerequisite skills to students with inadequate high school preparation, but assist students in preparation for even higher levels of education programs.

Since a nationwide erosion of reading and writing skills among most entering secondary students has disturbed educators across the country, many students are devastated by the change from secondary to higher education. The higher level of curriculum which assumes prequisite mastery of reading and writing skills has proven to be too much for some, and as a result drop-out rates rise alarmingly. Although the reasons for this national problem are unclear and continually debated, the results are tragically disconcernible on all campuses. Several surveys have revealed sizeable deficiences in reading rates, comprehension, and vocabulary development among college students. Similarly, the writing of today's student reflects erious weaknesses in spelling, sentence structure, and transition.

The Learning Center generally has learning laboratory components which frequently provides fundamental learning skill development work on an individual or small group basis in such areas as reading, vocabulary, writing, studying, and basic computational skills. Within these laboratories the use of instructional technology differs considerably with the philosophical orientation and financial resources of each respective center. Students are identified, assessed, and a prescriptive programs of remenditation are presented.

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

Operationally, learning centers vary in both name and functions from one institution to another. A trend of commonality does, however, run through most. Most are similar in that they seek to limit unnecessary pupil drop-outs, enhance learning skills, minimize the trauma of academic failure, ultimately improve the academic performance of their students, and most importantly, provide learning opportunities for the handicapped to get into the mainstream of higher education. Learning centers frequently deliver their services through the activities of sub-programs such as learning laboratories which are composed of: (a) counseling laboratories, (b) reading laboratories, (c) mathematics laboratories, (d) basic skills, (e) parafrofessionlaboratories, and (f) tutorial programs.

Learning Centers are frequently service different student population. At some institutions, these centers address the learning and achievement needs of the school in general. At other schools, special need groups are served. Some programs specifically serve disadvantaged and handicapped students who require special learning and achievement assistance. Still other programs focus on the specific needs of other minority or exceptional need groups.

As institutions of learning accommodate increasing segments of our nation's total population, the need for such academic support facilities as the learning center will necessarily expand. In the future it would not be uncommon to see such units in nearly all school systems. General component labs seen in some Learning Centers are:

THE COUNSELING LABORATORY

The counseling services provides students involved with the Learning Center consists of providing the student with useful information about himself, academic programs, and personal and vocational counseling.

The client-centered approach is generally the prevailing strategy used in personal and vocational counseling. The student is given assistance in making his own decisions about his life.

The Counseling Center will at times refer students to the Learning Center. The Learning Center uses the college Counseling Center as a place to refer those students who are experiencing difficulty in any area that might interfere with their being successful college students. The following five general tests are generally used more frequently with the student:

Testing Program

1. Stanford Binet Intelligence Test–A device used to measure general intelligence.

The specific areas measured are:

a. Vocabulary
b. Abstract words
c. Sentence building
d. Similarities and differences
e. Analogies
f. Sentence completion
g. Verbal absurdities
h. Reasoning

The mean score on this test is 100. Sixty-eight percent of the total population will score in a range of from 85-115 on this test.

2. ACT Test–This is a measure of academic aptitude for college work.

The specific areas sampled are:

a. English
b. Math
c. Natural Science
d. Social Science Reading

The Social Science section of this test is actually a measure of reading comprehension. Low scores on this test predict difficulty for most college students. A composite score of 12 or below in reading indicates a need for further diagnosis of the specific reading problem or problems.

3. Nelson Denny Reading Test–This test is designed to measure a student's ability to read in terms of vocabulary, comprehension and rate.

The sub-tests are:

a. Vocabulary
b. Comprehension
c. Rate

4. Survey of Study Habits and Attitudes–The purpose of the survey is to furnish an inventory of study habits and attitudes to serve as a foundation for self improvement.

The areas sampled are:

a. Delay avoidance
b. Work methods
c. Study habits

d. Teacher approval
e. Education acceptance
f. Study attitudes
g. Study orientation

5. Strong-Campbell Interest Inventory–This instrument is used with those students who have not selected a vocation or are beginning to have doubts about the field they have chosen.

   The inventory compares the interests of students with successful people in many different occupational groups. It is a tool to be used in vocational counseling.

From the above test scores, valuable information can be received to aid the student into the learning center.

THE MATHEMATICS LABORATORY

The Mathematics Component of the Learning Center primariiy is structured to serve students with mathematics deficiencies but it is also constructed to serve students wishing to advance beyond their normal class rate in Intermediate Algebra, College Algebra and Trigonomentry. Present mathematics materials in the Center cover the broad spectrum from basic arithmetic to algebraic and trigonometrics functions. With proper self discipline and time a studnet should improve his grad average in basic mathematics. Program features include:

The Mathematics Programs

1. The Computational Skills Development Program

   Consists of sixteen (16) skills building activities. These activities are addition, subtraction, multiplication and division with whole numbers, with fractional numerals, and with decimal numerals. There are also skills building activities in percents.

2. The Algebra Skills Development Program

   Provides students with individualized instruction in the skills of algebra. With the aid of a trained staff assistant the mathematics staff person is able to establish a program of skill instruction aimed at each student's needs and maintain a record of the progress of each student. This program provides activities with integers, rational numbers, rational and radical expressions, polynominals, exponents, etc.

3. The Audio Mathematics Programs

   Allows a change of media for the student. New interest may be generated in basic mathematics programs because of this change in media. This program consists of five modules; whole numbers and fractions, decimals and percents, number sentences, functions and graphs, and geometry. This is also an individualized program which can

be arranged to meet the student's specific needs in the above areas.

4. The General Mathematics Program

Consists of programmed texts in the area of Fundamentals of Arithmetic, Fundamentals of Elementary Algebra, and Fundamentals of Intermediate Algebra. This program allows for rapid review before taking a college basic mathematics course or before taking the CLEP exams.

5. Programmed Texts in Trigonometry

These programs in mathematics will give a student sufficient improvement in mathematical skills to make a "C" or better in basic college mathematics course, provided the student satisfies the time and effort requirements of his particular program and provided that the program he takes offers sufficient background for the mathematics course he attempts.

All program participants are given the McGraw-Hill pre aid post tests. Scores received are then prescribed to a specific remediation level.

THE READING LABORATORY

Reading Laboratory

The Reading Lab of the Learing Center in generally composed of:

1. active reading consultant
2. reading coordinators
3. trained para-professionals

Program development is initiated through the following procedures:

Refferals can come to the Learning Center from instructors in all disciplines, through other students, and by student voluntary initiative. Then students are interviewed to determine problems and needs. At this point, each student takes the Nelson Denny Reading Test, Spache, or informal testing to determine placement in the EDL Reading Program. Placement occurs after a staff discussion of the results of the screening procedure with each other and the student and a perscription to meet each student's needs. Other placement procedures include referrals to specialists if the student has any indication of needs in the following areas:

1. Reading Specialist
2. The Guidance Counselor
3. Vision Specialist

The Reading Program is organized into twelve graded levels of instruction and is structured to allow each student to enter at his level of need. The basic materials are

organized into Educational Developmental Laboratories Learning 100 System and EDL L300-400 System.

The Learning 100 System is for any poor reader or non-reader who cannot function effectively in the classroom because he lacks basic literary and communication proficiency. Three approaches are utilized:

1. Readiness Program
2. Basic Program
3. Intermediate Program

The EDL 300 Advanced Program consists of three areas:

1. Perceptual accuracy and visual efficiency
2. Skill building
3. Individual application and extension activities

Perceptual Accuracy training is achieved through Tach-X Accuracy Training, Motility Training, and Accentuated Discrimination Training.

The tachistoscope and the control reader are used in this training. Skill building involves control reader fluency training, listening, vocabulary development and study skills instruction. In this area the control reader is used to increase reading speed as reading fluency training, listening, vocabulary development, and study skills instruction. In this area the control reader is used to increase reading speed as reading fluency develops. PART III, individual application and extension activities are varied to meet students' individual needs and include the following programmed activities: teacher-student conferences, independent reading, Aud-X word attack review, comprehension power development, skimming and scanning, and individualized instruction.

Although in-depth comprehension and enrichment in all areas of reading are the primary objectives, techniques to increase more speed in reading are used. The Control Reader is set at a comfortable speed for the student so that he can practice reading at an adequate comprehension level while the speed is gradually increased. Wheter to increase speed or not is determined by comprehension development.

The follow up procedure consists of frequent checks of student progress records, updating recommendations in changes in any area of the student's individualized program, checks to determine if students have made enough progress to move up a level, and checks for problem areas. When a student has any difficulty, he is counseled toward the needed materials and given individual help to overcome his problem area.

Sophisticated equipment, instrumentation, and programs to help the student in the Reading Component of the Learing Center are:

THE READING PROGRAMS--EDL Program (Educational Developmental Laboratories)

1. EFI Wireless Learning Systems

   Description: This program enables staff members to pace a curriculum content to individual learning, even in a crowded classroom. Students can be located anywhere in a large room with just a handset receiver on and they can pick up an instructional learning unit without plugging in any cords to hear the instructions.

2. The Hoffman Reading Systems

   Description: A reading program that presents reading through natural language development of speaking, listening, reading and writing. Provides audio visual motivational techniques.

3. Franzblau Multi-Sensory Coordinator

   Description: An instrument that combines photosensitive electronic circuitry with the time-proven diagnostic/orthoptic technique of tracing mazes, designs, and geometric forms. Useful in the gross measurement and development of fixation, binocularity, fusion, oculomotor coordination, and spatial visualization. The Coordinator employs the patient's visual, auditory, kinesthetic, and tactile senses. It provides excellent therapy for amblyopes and strabismics, and can aid directionally and form perception development.

4. EDL Processing Motor

   Description: You can speed up the thinking process with the EDL processing Motor. EDL Processing Training filmstrip stores and projected one word at a time at exceptionally high rates (scanning speed is from 90 to 900 lines per minute, or approximately six times the speed of the Controlled Reader).

5. EDL Flash-X

   Description: EDL's Flash-X puts students in charge of their own perceptual training. Individualized drill is now possible with this handheld tachistoscope. The Flash-X exposes pictures, numbers, letters, or words on special discs at a preset exposure rate of 1/25 second.

6. EDL Flash-X

   Description: Touch a button, and pictures, symbols, numbers, letters, or words flash into, then out of, focus. Students write what they think they saw. The image is returned to view, and they check their responses for accuracy. More than just another bright idea, the EDL Tach-X really works. It helps students effectively develop accurate seeing skills, visual memory, and word recognition ability.

7. Controlled Reader Junior

   Description: Students find this 50-watt version of the Controlled Reader ideal when they work individually or in small groups. In study carrels or open study areas,

it has the same instructional training features as the larger instrument but the benefit of a projection distance of approximately 2 feet.

9. Diagnostic and Prescriptive Reading Tests

Description: To teach performance objectives of many diagnostic management systems and tests.

THE TUTORIAL PROGRAM LABORATORY

The Learning Laboratory Center administers a tutorial program as one of its major components. Excellent cooperation with other special services allows for efficient scheduling and non-duplication of tutorial services. Although the majority of tutorial assistance occurs within the building housing the Learning Center, other tutors scheduled in other classroom buildings within the proximity of professors who teach the subjects within the tutor's specialty are available.

Students exhibiting academic excellence are selected as tutors after one or more recommendations from faculty members. In addition to academic excellence the tutors are selected according to their ability to work well with others. This last factor is determined from faculty recommendations and a personal interview by the tutorial coordinator. Twenty hours of inservice produces above average tutors.

Care is taken to schedule tutors at the most appropriate times of the day or evening. Because of the difficulty in meeting the available times of all students needing assistance, tutors are usually allotted several unscheduled hours per week in order to provide tutorial assistance by appointment.

The faculty has a strong influence on the tutorial program. Usually, tutors are initially assigned in a subject area after requests are made by faculty members wishing tutorial assistance for their students. These faculty persons in turn notify their students of tutor schedules published by the Learning Center.

Daily records are kept on tutorial activity. These statistics help to evaluate the effectiveness of the program and help in projecting future tutorial needs and services.

"Peer to Peer Counseling Techniques" are developed for the tutor using Dr. William Brown's model. Twenty hours of inservice work helps develop counseling techniques and instructional expertise.

PARAPROFESSIONAL PROGRAMS IN THE LEARNING CENTER
A DESCRIPTION OF THE PARAPROFESSIONAL AREA AS IT RELATES TO THE HANDICAPPED IN COLLEGE LEARNING CENTERS

I. INTRODUCTION:

Paraprofessionals is a term to describe a qualified college student who assists faculty members and fellow peers in the Learning Center. This person is employed by the Learning Center under work study, general employment, or through scholarship programs.

II. SELECTION:

The basic qualifications a paraprofessional possesses are:

1. A college student in good standing.
2. Grade point average above the graded "C".
3. Eligible for work study or general scholarship monies.

III. FUNCTIONS:

The primary function of the parafrofessional is to assist the faculty staff in improving the educational learning for college students who seek help in their strength or deficit learning process. They are under the leadership of the faculty staff in the Learning Center and under the close supervision of the Learning Center's director.

IV. TRAINING:

A well planned orientation program is a vital part of the paraprofessional's training. The program includes:

1. A general orientation to the Learning Center by the complete faculty staff.
2. The role of the paraprofessional in the Learning Center presented to them by the Vice President for Student Affairs
3. Training work sessions in the areas of:
   a. The Reading Laboratory
   b. The Math Laboratory
   c. Peer to Peer Counseling
4. A one hour guidance session under the direction of the Director of the Counseling Department.
5. A presentation of the operation of the instrumentation of the Learning Center by manufacturers of materials used in the Learning Center.
6. Familiarization of video tapes that relate to counseling and program development.

7. Participation with students in need of help with supervision.
8. Continual in-service education relating to the Learning Center.
9. Each paraprofessional will take all tests as do the students who come in for educational assistance.

V. Future development of the Learning Center as it relates to the paraprofessional is incorporated in the following future proposal included in the following section.

BASIC SKILLS LABORATORY
A DESCRIPTION OF THE BASIC SKILLS AREA AS IT RELATES TO THE HANDICAPPED IN COLLEGE LEARNING CENTERS:

Dr. William Brown of Southwest Texas State University and associates have developed effective learning systems which have proven successful for pupils (regular or special) going from (1) elementary to secondary school, and (2) secondary to colleges and universities. Many institutions are utilizing these programs with high degrees of success in the basic skills laboratory. Scholastic success and satisfaction have been identified by Brown as related concepts:

"... study skills and positive academic attitudes as important contributors to successful scholarship."

Brown and associates have developed an inventory to study habits and methods to help students toward self-improvement. The inventory is called the "Survey of Study Habits and Attitudes" (SSHA). The content of their material can be useful for all learners to (1) measure strengths and weaknesses, (2) predict academic achievement, and (3) orient the teacher to develop a prescriptive approach to learning.

The SSHA measures:

DELAY AVOIDANCE (DA)–your promptness in completing academic assignments, lack of procrastination, and freedom from wasteful delay and distraction.

WORK METHODS (WM)–your use of effective study procedures, efficiency in doing academic assignments, and how-to-study skills.

TEACHER APPROVAL (TA)–your opinions of teachers and their classroom behavior and methods.

EDUCATION ACCEPTANCE (EA)–your approval of educational objectives, practices, and requirements.

STUDY HABITS (SH)–combines the scores on the DA and WM scales to provide a measure of academic behavior.

STUDY ATTITUDES (SA)–combines the scores on the TA and EA scales to provide

a measure of scholastic beliefs.

STUDY ORIENTATION (SO)–combines the scores on the SH and SA scales to provide an overall measure of study habits and attitudes.

Since learning assignments for pupils are becoming more difficult to handle, the teacher can alleviate pupil anxieties through the awareness of the Brown-Holtzman Basic Skills Test.

The teacher, in her classroom, can develop a component basic skills laboratory with the utilization of Brown's Effective Study Materials. Brown's material can alleviate student learning problems by helping him to:

Organize Course Activities	Analyze Scholastic Motivation Problems
Survey Study Skills	Analyse Personal-Social Adjustment Problems
Analyze Time Management Problems	Analyze Study Concentration Problems
Analyze Note Taking Problems	Review for Final Examination
Analyze Textbook Reading Problems	Evaluate Study Skills Knowledge
Analyze Examination Taking Problems	Approach Forecasting Scholastic Success
Analyze Theme and Report Writing Problems	Analyze Speech Making Problems

"Learning Centers" appear to be the most probably future prescription for learning deficiencies for regular and special education student, and possibly even the innovative learning method educators have been seeking. Students are now moving into the mainstream of higher education.

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Mr. Leroy Sullivan is Director of The Learning Development Center at the University of Arkansas at Little Rock. He has written over 25 research documents.